

IN THE CLAIMS:

Please amend claims 1, 3-5, 7-9, 12, 14, and 15, as follows.

1. (Currently Amended) A reaction solution for use in image recording in conjunction with an ink containing a coloring material in a dissolved or dispersed state, the reaction solution destabilizing the dissolved or dispersed state of the coloring material in the ink after [[in]] contact with the ink,

wherein the reaction solution contains at least a polyvalent metal ion and a nonionic polymer, the Ka value of the reaction solution according to the Bristow method is from 1.3  $\text{mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  to 3.0  $\text{mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  inclusive, and the viscosity of the reaction solution is from 20  $\text{mPa} \times \text{s}$  to 150  $\text{mPa} \times \text{s}$  inclusive.

2. (Original) The reaction solution according to claim 1, wherein the polyvalent metal ion is contained from 0.01% to 10% inclusive by weight based on the total amount of the reaction solution.

3. (Currently Amended) The reaction solution according to claim 1, wherein the pH of the reaction solution is from 2 to 7 inclusive.

4. (Currently Amended) A set of an ink and a reaction solution comprising the ink containing a coloring material in a dissolved or dispersed state, and the reaction solution

destabilizing the dissolved or dispersed state of the coloring material in the ink after [[in]]

contact with the ink,

wherein the reaction solution contains at least a polyvalent metal ion and a nonionic polymer, the  $K_a$  value of the reaction solution according to the Bristow method is from  $1.3 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  to  $3.0 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  inclusive, and the viscosity of the reaction solution is from  $20 \text{ mPa} \times \text{s}$  to  $150 \text{ mPa} \times \text{s}$  inclusive.

5. (Currently Amended) An inkjet recording apparatus comprising a recording head for discharging an ink containing a coloring material in a dissolved or dispersed state, an ink cartridge having an ink storage unit containing the ink, ink supply means for supplying the ink from the ink cartridge to the recording head, and means for supplying a reaction solution that destabilizes the dissolved or dispersed state of the coloring material in the ink after [[in]] contact with the ink,

wherein the reaction solution contains at least a polyvalent metal ion and a nonionic polymer, the  $K_a$  value of the reaction solution according to the Bristow method is from  $1.3 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  to  $3.0 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  inclusive, and the viscosity of the reaction solution is from  $20 \text{ mPa} \times \text{s}$  to  $150 \text{ mPa} \times \text{s}$  inclusive.

6. (Original) The inkjet recording apparatus according to claim 5, wherein the amount of the polyvalent metal ion is from 0.01% to 10% inclusive by weight based on the total amount of the reaction solution.

7. (Currently Amended) The inkjet recording apparatus according to claim 5, wherein the pH of the reaction solution is from 2 to 7 inclusive.

8. (Currently Amended) The inkjet recording apparatus according to claim 5, wherein the pH of the reaction solution is lower than that of the ink.

9. (Currently Amended) The inkjet recording apparatus according to claim 5, wherein the viscosity of the reaction solution is greater than that of the ink.

10. (Original) The inkjet recording apparatus according to claim 5, comprising a coating roller for applying the reaction solution onto a recording medium.

11. (Original) The inkjet recording apparatus according to claim 10, wherein the reaction solution is applied onto the recording medium in an amount from 0.5 g/m<sup>2</sup> to 10 g/m<sup>2</sup> inclusive.

12. (Currently Amended) An image recording method comprising the steps of: coating a recording medium with a reaction solution capable of destabilizing the dissolved or dispersed state of a coloring material in an ink after [[in]] contact with the ink containing the coloring material in a dissolved or dispersed state; and coating the ink on the recording medium by an inkjet method, wherein the reaction solution contains at least a polyvalent metal ion and a

nonionic polymer, the  $K_a$  value of the reaction solution according to the Bristow method is from  $1.3 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  to  $3.0 \text{ mL} \times \text{m}^{-2} \times \text{msec}^{-1/2}$  inclusive, and the viscosity of the reaction solution is from  $20 \text{ mPa} \times \text{s}$  to  $150 \text{ mPa} \times \text{s}$  inclusive.

13. (Original) The image recording method according to claim 12, wherein the polyvalent metal ion is contained in an amount from 0.01% to 10% inclusive by weight based on the total amount of the reaction solution.

14. (Currently Amended) The image recording method according to claim 12, wherein the pH of the reaction solution is less than 7.

15. (Currently Amended) The image recording method according to claim 12, wherein the pH of the reaction solution is lower than that of the ink.

16. (Original) The image recording method according to claim 12, wherein the viscosity of the reaction solution is greater than that of the ink.

17. (Original) The image recording method according to claim 12, wherein coating of the reaction solution on the recording medium is carried out by a coating roller.

18. (Original) The image recording method according to claim 17, wherein the reaction solution is applied onto the recording medium in an amount from 0.5 g/m<sup>2</sup> to 10 g/m<sup>2</sup> inclusive.